DESERT PLANT LIFE

PACHYCEREUS ORCUTTII

PALMER'S MAMMILLARIA

Mammillaria neopalmeri (Coulter) Craig

George Lindsay

INTERNATIONAL BOTANICAL
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PACHYCEREUS ORCUTTII DISCOVERED

Whether it is a sunken galleon with pirate loot aboard, an abandoned goldmine in the desert, a lost cactus or a tiny moth, the imagination leaps up to participate in the search for rediscovery.

Now that *Pachycereus Orcuttii* has been brought from its hiding to San Diego once more, a review of circumstances, making possible this

epochal event may not be inappropriate.

In one of those "unusual" years so common in California, insect hoards migrated further north than was their wont, and in 1888 three specimens of the Euterpe sphinx moth were collected. When later the San Diego Museum of Natural History found it had none, Charles F. Harbison, present Curator of Entomology was commissioned (1935) to secure other specimens. This meant going to Lower California, the habitat of *Pachycereus Orcuttii* likewise of great interest to the collector. With a butterfly net in one hand, gunny sack and machete in the other, he set out in the general direction of Rosario.

First trip. No moth. No pachycereus.

Once he went as far as Punta Prieta with like results.

Last December in Rosario he showed the photograph of *P. Orcuttii*, from the Museum, published in DPL (Oct. 1942), to Señora Anita G. Espinosa. She became most enthusiastic regarding a cactus of such historic interest.

In February of this year she sent word that it had been located by a native and brought to her. In March she sent the plant to Tiajuana at the Mexico-California port of entry where Mr. Harbison went down to claim his precious find.

One cutting he is trying to grow in his own garden in National City, another cutting is for George Lindsay and the third has been presented to the Huntington Botanic Gardens at San Marino.

The original plant in Orcutt's garden was also from a cutting, though later it flowered and was described.

The exact locality of *Pachycereus Orcuttii* has never been given, and purposely so but is admitted to be in the general region of Rosario; between one hundred and three hundred miles, being a fair guess.

No one seems to have stressed the fact that two women had their share in making this cactus known to the world. First, Mrs. Brandegee who described the plant stating it was much the finest of the larger Cerei of Baja California and Señora Spinosa who was instrumental in bringing back to civilization a lost but never forgotten plant from the wilderness.

So far no white man or botanist had seen this cactus in its native habitat.

Recently Mr. Harbison accompanied by a photographer spent 11 days in Baja California. When he visited DPL office here he had the pictures to sustain his claim. There were two 9-ft. specimens, one in bud the other with some desiccated last year's fruits.

Six herbarium sheets are to be prepared from material gathered for the Natural History Museum according to its Bulletin. (May)

TO THE INTERNATIONAL BOTANICAL CONGRESS, STOCKHOLM, SWEDEN

Among the scientists, from the Pacific Coast, Europe bound are Dr. and Mrs. E. Yale Dawson. They are driving across the Continent to Boston where they will board an American Airline's plane, their final objective being Stockholm, Sweden.

Here the Seventh International Botanical Congress will be meeting, for an interchange of ideas and opinions, relative to the plant world,

July 12-20.

Scheduled to present a paper is Dr. Dawson, graduate of the University of California with the Doctor's degree in the field of botany and for the past ten years Research Associate in Marine Botany at Allan Hancock Foundation, University of Southern California. Representing the Foundation his topic will cover as complete a presentation as is possible in the allotted time. It will deal with the "Vegetation of upwelling areas in Lower California" a research project for which he has been gathering data for the past five years on exploration vessels provided by the Foundation.

A number of stopovers will be made enroute; first Trinity College, Dublin, Ireland, next museum in Manchester, England followed by

one to the British museum in London.

On the continent Dr. Dawson will stop at the Rijks museum in Leyden, Holland, and in Hamburg a horticultural display assembled by German scientists will be visited. While in this city he will be the guest of Curt Backeberg with whom an animated correspondence has

been carried on for some time.

Another botanical museum of importance he will see is in Copenhagen, Denmark, with the final stop immediately preceding the botanical congress at the marine botanical laboratory at Goteborg, Sweden where delegates to the international event will embark upon a short scientific excursion prior to assembling at Stockholm for the 2 week worldwide conference. Following the international congress, Dr. Dawson reported he will visit the National Museum in Paris before setting out on his homeward journey.

U.S.C., Allan Hancock Foundation, Natural Science Series has scheduled Dr. Dawson as its first speaker of the 1950-51 when he will

give an account of the summer's experiences.

This is not the only time a contributing editor of Desert Plant Life has been an International Botanical Congress delegate. Besides Dr. Dawson, there was Alvin Berger appointed to the Congress, London, 1930, from Stuttgart, Germany.

Lyman Benson, Ph.D., head department of botany, Pomona College, is going to the Congress as a representative of the Claremont Colleges, Claremont, California and the California Academy of Sciences.

Dr. Benson will be remembered by the initiated as co-author of "A Manual of Southwestern desert trees and shrubs" including cacti and as lecturer and writer on cactus, before scientific bodies on the coast. Incidentally it is he who abstracts the articles from DPL along with other magazines for *Biological Abstracts*.

It is most fortunate that we are having from the Pacific Coast two

such able men alert to our special interests.

PALMER'S MAMMILLARIA

Mammillaria neopalmeri (Coulter) Craig



CLUMP OF M. NEOPALMERI IN FLOWER.
NOTE FLOWERS ARE PERFECT.

The San Benitos, a group of three small islands, are located off the coast of Mexico about three hundred miles south-east of San Diego, California, and are the home of *Mammillaria neopalmeri*.

Two years ago I visited the west and east islands, where the plants were found to be rather abundant. Returning to the San Benitos this winter on the research ship "Orca", I had opportunity to visit the low lying middle island, and there was astounded by the numbers of *Mammillaria neopalmeri*. Mammillarias in their native habitat are often widely scattered, requiring much searching to locate a few specimens. On Middle Benito island Palmer's Mammillaria seemed to occupy every foot of the island above the areas utilized for rookeries by the sea lions, the other inhabitants of the islet! The fact is that the mammals and the mammillarias share some areas, as evidenced by clumps of the little cacti having nearly all their spines worn off by the trampling flippers of the sea lions!

On March 25, 1889, Dr. Edward Palmer, who was then engaged in making botanical collections for the U.S. Department of Agriculture, visited the San Benitos Islands, and there made a collection of seventeen plant species. Among them was this little mammillaria, which was reported as Mammillaria Goodrichii. John M. Coulter described the plant as Cactus Palmeri in 1892, and deposited the type specimen in the U. S. National Herbarium. Katherine Brandegee, in 1897, published Mammillaria dioica," the common little mammillaria found about San Diego, which there-to-fore had been considered to be M. Goodrichii as listed by Engelmann.' In the same article she described our San Benito plant as M. dioica var. insularis, noting it had been described as Cactus Palmeri by Coulter, but pointing out that the name, Mammillaria Palmeri had been used by Jacobi in describing an entirely different plant. Britton and Rose placed the little fellow, using the specific name of *Palmeri*, under their genus *Neomammillaria* and C. R. Orcutt included it in his genus Chilita'! In 1933 Böedeker finally placed Palmeri in the genus Mammillaria," not realizing that name had been previously used to describe a different plant. In 1945 Dr. Craig added the suffix Neo to the specific name Palmeri," thus establishing the present designation of Mammillaria neopalmeri Craig! We find the name has changed more times than the plant has been collected!

Mammillaria neopalmeri grows on all three of the San Benitos islands, but is most abundant on middle Benito. There it forms many

Vasey and Rose, List of Plants Collected by Dr. Edward Palmer in 1889, Cont. U. S. Nat. Herb. I, 21, 1890.

^{2.} Coulter, John M., Preliminary Revision of the North American species of Cactus, Anhalonium, and Lophophora, Cont. U. S. Nat. Herb. III, 108, 1894

Brandegee, Katherine, Mammillaria (Eumammillaria) Dioica, Erythea V, 115. 1897.

Engelmann, George, Cactaceae of the Boundary, 8, 1859 (In United States and Mexican Boundary Survey).

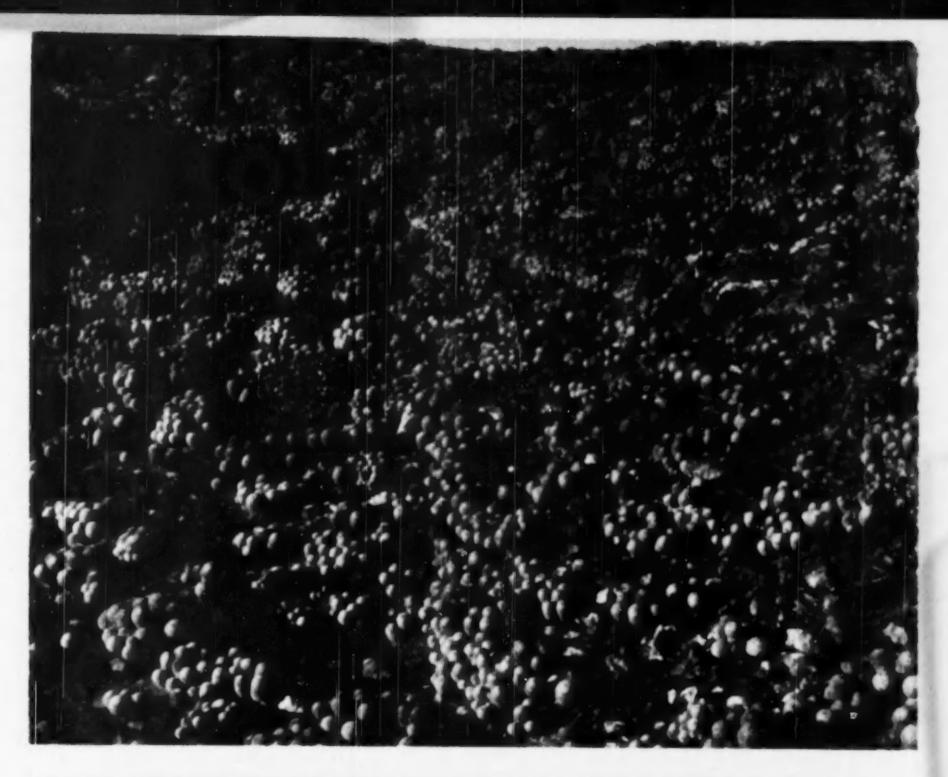
^{5.} Jacobi, Allg. Gartenz., 24:82, 1856.

^{6.} Britton and Rose, The Cactaceae IV, 140, 1923.

^{7.} Orcutt, C. R., Chilita palmeri, Cactography, 2, 1926.

^{8.} Boedeker, Frederick, Ein Mammillarien Vergleichs Schlussel, 1933.

^{9.} Craig, Robert T., The Mamillaria Handbook, 267, 1945.





M. NEOPALMERI ON MIDDLE BENITO ISLAND (Upper).
M. NEOPALMERI IN WEST BENITO ISLAND (Lower).

headed clumps, usually about one foot in diameter. The size of the individual stems varies a great deal, averaging two inches in diameter, with exceptional ones sometimes three.

As we have noted, Katherine Brandegee treated the San Benitos plant as a variety of *Mammillaria dioica*, designating it as variety *insularis*. In her original publication she included the following comments:

"M. dioica var, insularis. Cactus palmeri Coult. Cont. Nat. Herb. III, 108, not M. Palmeri Jacobi, in Otto and Dietr. Alg. Gart. XXIV (1856) 82.

"Differing from the type (M. dioica) in its more densely caespitose form, more wooly axils, and shorter spines, which are usually whiter, shorter, more numerous, and the centrals ordinarily straight. Flowers and fruit as in the type.

"This plant was named as a species principally because of straight central spines, but in the numerous specimens brought from San Benito Island (it has been found nowhere else), many of the lower centrals are hooked and darker, as in the type of dioica. Both the type and the variety are nearly dioecious, many plants male, with imperfect, less divided style-branches, which rarely bear fruit, and the few which occasionally appear slender and few seeded; many female, with entirely abortive anthers and very small flowers, which usually produce a dense row of thick oval or clavate, coral berries; others hermaphrodite or imperfectly dioecious in all degrees."

Mammillaria neoplameri was in flower both times I visited the San Benitos, April 18, 1948, and February 5, 1950. The plants bore fruit as well as flowers in April, indicating a prolonged flowering season. My field notes state that both perfect and dioecious flowers were observed, although the perfect flowers were more common. I also noticed that in occasional plants some of the central spines were inclined to be hooked, this character most commonly evidenced on a single stem in a cluster, probably indicating a throw back to a dioica-like ancester. The white, wooly appearing clumps are very attractive, and fine specimens for collections. Unfortunatly few plants have been collected, and they are rare in cultivation.

Before the time of our first visit the only specimens in collections appear to have been brought back by fishermen. Unfortunately the fishermen making the collections brought plants from several different islands, and kept no accurate record of collection localities. As a result of this misinformation Dr. Craig, in his excellent Mammillaria Handbook, notes that the species occurs also on Guadalupe Island. This is in error, as *Mammillaria neopalmeri* is known only from the San Benitos. Also, the plant is seldom simple except in very young seedlings, which soon produce branching heads.

Photographs by Author.

TWENTY YEARS-SWISS CACTUS SOCIETY

As this is being written, Saturday, May 27, members of the Switzerland Kakteen-Gesellschaft are meeting in Cademario in celebration of

their twentieth anniversary as a cactus society.

On the occasion of a cactus exhibit June, 1930, Basel, local enthusiasts with visitors from Zürich, formulated plans resulting in December of that year at Luzerne in a permanent organization. Six months later there were in existence 7 branches with a membership of 270 at present having increased to 600. Dues imposed being insufficient for a publication of their own, special arrangements were made to subscribe to German Monatsschrift. Later, however (1942) Mitteilungen appeared bringing prestige and exchanges in gratifying quantities.

Four years after a system of patron members, was evolved, now numbering 48, who have made possible Sukkulentenkunde, I, II, III

with IV due shortly.

A moving spirit throughout has been H. Krainz editor of both

periodicals but serving for fifteen years as president as well.

Starting out with the name "Swiss Society of Cactus and Succulent-friends" it was changed 1944, to Swiss Cactus Society, an appellation much more desirable to the purists.

May the society continue to grow in number and good works. Con-

gratulations!

INTERNATIONAL KONGRESS DER SUKKULENTENFORSCHER

For several years past, endeavors have been made to bring about a coalition of succulent interested societies throughout the world.

It required no expert forcasting to predict that the proposition would not gain whole hearted accord among prospective units, considering the chaotic condition of world opinion on most any subject that might be mentioned. There was no reason to believe that agreement could be reached any sooner or better on the controversial questions that would arise at such a gathering than has been achieved among nations with their problems. The very prospect that there might be—probably would be—domination exercised, aroused suspicion and criminations such as can exist only among those motivated by an allpowering love for cactus plants.

Someone with extra oil poured it on the seething sea and the waters became calm again, outwardly at any rate. The idea as a whole went

underground.

Now another banner has been hoisted but the marchers are the

From Switzerland again the call has come for a meeting, this time a congress, international in scope to be held in the auditorium of the University of Zürich, first announced for April but now postponed to the end of September.

Among topics up for consideration are: Organization aims; research and its most pressing problems; specialist defined; attracting the laymen; survey of existing materials such as original or rare plants; provisional system of classification; a universal repertorium literaturae et diagnosarum novarum, as it relates to Cactaceae.

AN INTERNATIONAL CONGRESS

(Of July, 1932)

This is not the first time an international gathering of cactus experts has been thought of. In the United States, eighteen years ago, there appeared in DPL suggestions as noted in the paragraphs below. Before that, forty years previously, the idea was mentioned in the *Baltimore Cactus Journal*.

That an international organization of succulent lovers is a consummation, devoutly to be hoped for, is judged from correspondence with various bodies. Abroad already they dream of international congresses of succulent collectors at Contich, La Mortola, Erfurt, The Berlin Botanical Museum, and of course not forgetting Kew.

Since the next Botanical Congress will be held in Amsterdam in 1934—we quote from a recent letter—it would be fine, if we could manage to arrange a meeting at the same time, as mentioned.

Here in America we don't mind saying we have been talking about it too. Even in the early days of the Baltimore Cactus Society, its leaders looked forward to some such world wide union. No isolated groups, on any subject ever had more to hope for from such a meeting, than cactophiles.

Across the big water, the botanic gardens and nurseries will get better and better; here the natural attractions are becoming poorer and poorer Therefore this is the time to have such a meeting here in California while there is still something left to show the world.

We suggest that the meeting be held here where the stuff grows. What about the San Diego Exposition, Balboa Park, the hub of the California, Arizona and Mexican cactus country?

Meanwhile let us hope that salaries will increase and steamship rates will be lowered.

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Reading and Reference \$

JARDIM BOTANICO RIO DE JANEIRO Vol. IX, December 1949, published by the Ministerio da Agricultura has a twenty-five page article "Neue Kakteen aus Brasilien (Cactáceas novas do Brasil)" by Curt Backeberg. Much of the descriptive and photographic material from the Garden is credited to A. C. Brade and Otto Voll, the latter being collaborator with the author in the descriptions of new varieties and species, brought or sent in by different collectors during the years 1934-1939.

New species and varieties include:

Arrojado penicillata (Guerk.) Br. & R. var decumbens Backbg. et Voll var. n.

Arthocereus Mello-Barretoi Backbg. et Voll n. sp.

Brasilicereus Markgrafii Backbg. et Voll n. sp.

Epiphyllopsis Gaertneri (K. Sch.) Berg. var. Tiburtii Backbg. et Voll n. var.

Frailea alacriportana Backbg. et Voll n. sp.

Parodia alacriportana Backbg. et oll n. sp.

Parodia gummifera Back. et Voll n. sp.

Notocactus Ottonis (Lehm.) Berg. var. elegans Backebg. et Voll n. var.

Notocactus Ottonis (Lehm.) Berger var. villa-velhensis Back. et Voll n. var.

Pilocereus campinensis Backbg. et Voll n. sp.

Piloc. floccosus Backbg. et Voll n. sp.

Accompanying photographs show the plants in flower, both cultivated and in the wild. The text is equally divided into Latin, Portuguese and German.

The French have a book for it too. The most important to emerge from their Republic thus far, is by Dr. A. Bertrand and Dr. O. A. Guillaumin, both directors of the Natural History Museum at Paris and fortunately interested in a subject too often overlooked by the science minded.

"Cactées," a 126 page book has 49 black and white illustrations of excellent quality and is in the fore with ten color reproductions, an unusual number for a volume of such modest proportions.

The first part is taken up with cultural suggestions as a whole. The second, takes the reader briefly, through the cactus family, botanically adhering to system as given by Britton & Rose. It is the first in this language to be thus symplified for easier assimilation of those interested. Price quoted from the publisher, 675 frs. Quoting from the foreign exchange today a franc is .28 % of a cent off /. .001/16. Figure it out yourself.

U. S. DEPARTMENT OF AGRICULTURE DIVISION OF BOTANY

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